

ABSTRACT

The present invention is directed, *inter alia*, to devices and methods for excavating valuable materials, particularly soft ores such as oil sands, oil shales, and the like, that use one or more of a number of features, including backfilling for ground support, a small trailing access tunnel, processing of the valuable material in the excavation with the tailings optionally being used as backfill and the valuable material being transported to the surface, a plurality of movable shields for ground support, and/or a movable tail shield to provide interim support to the backfill while additional liner sections are installed and/or formed.

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